The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXV November 18, 1946 NO. 7

PAGE

National Spirit Still Lives in Wales 3
China's Disputed Chefoo Makes Hair Nets 5
National Park Series: No. 7. Zion 7
Bulgaria's New Assembly Rules Land of Farms 9
South-West Africa Wants to Join Union 11

FOX, BRITISH COMBINE

COCKLE GATHERERS SORT THE SHELLS THAT SELL SO WELL IN WALES

From the mud flats of Burry Inlet, women collect the succulent shellfish and bring in their day's find on donkeyback. After being graded according to size, the cockles are sold in the eating places and markets of Swansea and other cities of the southern Welsh coast (page 3).

National Spirit Still Lives in Wales

IN Wales, rugged west-central peninsula of Great Britain, efforts have been renewed to secure a special department for Welsh affairs within the British government. National spirit, never dead in the breasts of the "marching men of Harlech," has increased in recent decades.

For more than a thousand years history and geography have combined both to link and to separate England and Wales. A relief map shows graphically the physical ties between the two countries. From the Welsh central highlands, four important river valleys open eastward toward the English midlands.

Population Is Crowded in Southeast

The coastal plains of north and south Wales provide highways of communication in use since Roman, Norman, and English conquerors marched this way. The northern route, between Chester and Holyhead, is still an important section in the land-and-water artery between England and Ireland.

Along the coastal lowlands, particularly in the southeast facing England's Monmouthshire, are concentrated most of the New Jersey-size peninsula's two and a half million people. The bulk of the land, however, is made up of the thinly settled hilly interior.

In this remote region of moors and heather, dominated by rocky, castle-crowned peaks and relieved by occasional fertile stretches, farming has offered for centuries the chief means of a frugal existence. A distinctive industry of the south shore is based on the cockle, an edible, shell-covered mollusk (illustration, cover).

The discovery of rich mineral resources—iron, copper, zinc, tin, lead, and especially high-grade coal (illustration, page 4)—transformed Welsh economy. Mining and manufacturing towns grew up. Cardiff quickly grew into one of the world's leading coal exporters. Swansea, also on the south coast of Wales, took the lead among Britain's metal-products shipping ports and became a world center for copper smelting and refining.

Tourist Trade Expansion Planned

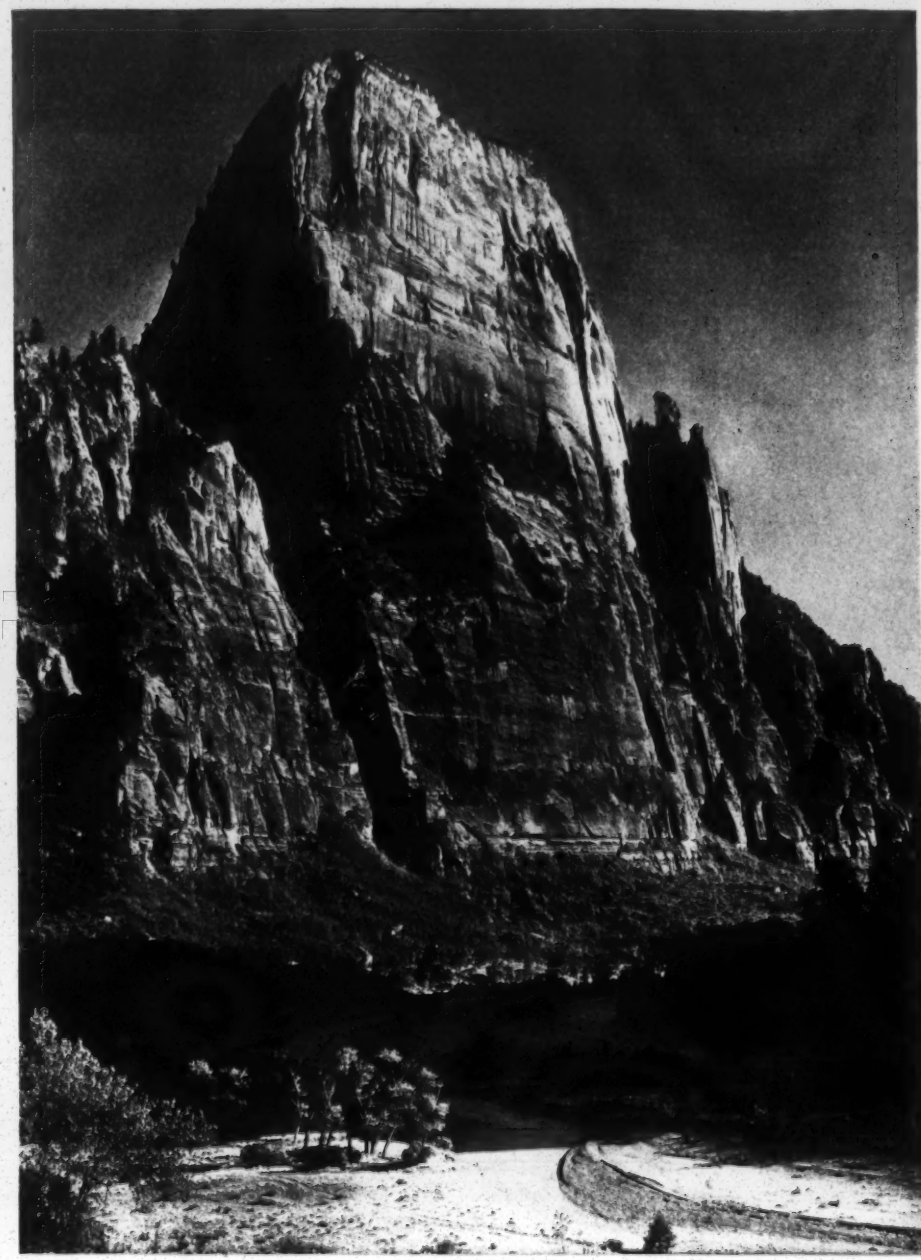
For a time, exhaustion of local iron ores, loss of foreign markets for coal, and world-wide depression brought hard times. The lot of the Welsh coal miner during the '30's has often been described. World War II, with the dispersal of British industry, gave the Welsh production curve a sharp swing upward—but at the price of enemy bombings.

Today, planning is directed not only toward restoration of the old heavy industry, but toward introduction of products of light industry, improvement of transportation, and development of a tourist trade.

Interest in the Welsh language and tradition, strongly revived during the 19th century, continues to increase. A cultural rather than political movement, it is demonstrated in such festivals as the *Eisteddfod*, which features the old songs, poetry, legends, and folklore. About 200,000 per-

ENTERED AS SECOND-CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
COPYRIGHT, 1946, BY THE NATIONAL GEOGRAPHIC SOCIETY. INTERNATIONAL COPYRIGHT SECURED. ALL RIGHTS RESERVED.

UMI



G. A. GRANT, COURTESY NATIONAL PARK SERVICE

THIS SKYSCRAPER OF THE SOUTHWEST RISES TWICE AS HIGH AS THE EMPIRE STATE BUILDING

Mormons settling in southern Utah called this gigantic sandstone tower the Great White Throne. From the purple-shadowed floor of Zion Canyon to its cream-colored summit is 2,447 feet. Two parallel rows of such formations rim the breath-taking canyon in Zion National Park (page 7).

China's Disputed Chefoo Makes Hair Nets

CHEFOO, embattled for days in China's warfare between nationalists and communists, is widely known for a little-known industry. It held prewar rank as the world's chief source of hair nets made of human hair.

The former treaty port on the Shantung Peninsula, south across the entrance to the Gulf of Chihli (Po Hai) from Dairen and Port Arthur (Ryojun), acquired the hair-net industry during World War I. Germans transplanted it from central Europe. At Chefoo, long pigtails and low-cost labor, the industry's chief necessities, were plentiful.

Once a Five-million-dollar Industry

Making hair nets (illustration, page 6) is one of China's many "cottage industries." Farm women and girls learn the trade in Chefoo, then make the nets in spare hours at home. They work mostly through the winter, when farm duties are lightest.

Silk, pongee, vermicelli, and peanuts are staple items in the port's normal trade. Rough-surfaced pongee, in which cotton is sometimes woven with the silk, is called Shantung, named from the province in which Chefoo is located. The word pongee is taken from the Chinese characters meaning home loom—indicating that this distinctive silk fabric is also a cottage industry.

Hair nets, rocketing early in the 1920's to a $5,000,000 annual value, gave work to 17,000 people in Chefoo's hinterland. A sharp setback occurred when Dame Fashion decreed bobbed hair for the Western world.

Bobbed hair or no, the hair-net market persisted. Shantung hair nets were sorely missed when they disappeared after Chefoo's fall to Japan in 1938. May, 1946, brought the first large-scale postwar shipments to the United States—valued at $245,000.

Chefoo's well-equipped port lies on the busy Shantung-Tientsin coastal steamship route. Good motor roads lead inland, but lack of a spur line to the port from the Shantung railroad has lost Chefoo considerable trade to Tsingtao, on Shantung's southeast coast.

Base for United States Asiatic Fleet

The farm scene around Chefoo belies China's reputation as a rice-growing nation. Wheat covers the terraced Shantung fields, supplying the hard-type grain used to make vermicelli. Lying in the latitude of Norfolk, Virginia, the port has a cool, healthful climate that attracts summer visitors. August, the hottest month, averages 77 degrees.

In many prewar years, the United States Asiatic fleet of 20 to 30 vessels anchored from May until September in Chefoo's mountain-girt harbor. Families of Navy men followed the fleet there from Manila and Shanghai to enjoy the summer season. They added numbers to the city's well-kept foreign quarter, with its bankers, traders, and shipping men, and its club and United States Consulate.

Chefoo, opened to foreign trade in 1862, was one of ten treaty ports added to the original fifteen as a result of treaties in 1858 and 1860. The total reached 49 by the time of the Chinese Revolution in 1911. Treaty

UMI

sons speak only Welsh; nearly a million use both Welsh and English.

Into the Welsh hills the early Britons fled before the Anglo-Saxon invasion. There, in the shelter of narrow, isolated valleys, these Celtic people maintained their independence. Though tribally disunited and often fighting among themselves, these hill people hated the Anglo-Saxons enough to fight them off successfully. The invaders disdainfully gave their foe the name Welsh, meaning foreigner. The Welsh called themselves *Cymry*—"brothers who occupy the same land."

Near the end of the 13th century, more than 200 years after the Normans had conquered the Anglo-Saxons, Edward I of England brought about Welsh submission. Edward named his infant son the "Prince of Wales," originating the familiar title for England's heir to the throne.

NOTE: Wales is shown on the National Geographic Society's Map of the British Isles. A price list of maps may be obtained from the Society's headquarters, Washington 6, D. C.

For further information, see "Wales in Wartime," in the *National Geographic Magazine* for June, 1944; "Sheep Dog Trials at Llangollen," April, 1940*; "We Live Alone, and Like It," August, 1938*; and "A Short Visit to Wales," December, 1923. (*Issues marked with an asterisk are included in a special list of Magazines available to teachers in packets of ten for $1.00.*)

ROBERT CAPA-PIX

HOW GREEN WAS RHONDDA VALLEY IS MERELY A MEMORY OF OLD WELSHMEN

For these young mine workers near Cardiff, the original beauty of their home has always been buried under collieries, coal dust, slag piles, and dull rows of company houses.

Zion, Where Single Rocks Dwarf Skyscrapers

GIANT monoliths—some of the largest single rocks in the world—rise in rainbow-hued majesty as high as 2,500 feet and more from the green floor of Zion Canyon. This is about twice the height of New York City's Empire State Building.

The canyon, main feature of south Utah's Zion National Park, is first viewed from the bottom instead of from the rims as at Bryce and Grand canyons. Its huge sandstone formations, red at their bases, shade into pink halfway up, and gleam near the top with a white, bleached purity. Some of them are capped by a vermilion layer at the very summit.

Virgin River Dug the Canyon, Is Still at Work

On the slopes at the base of these natural monuments and on ledges far up the sheer walls evergreens grow, contrasting vividly with the red of the rock. On the canyon floor cottonwoods, box elder, and willow trees make a lacy, light green carpet—a cool, moist oasis in semi-desert southern Utah.

Zion Canyon was dug by the north fork of the Virgin River, seemingly a small stream to have done so much work. The river, still busy, follows the same twists and turns it did millions of years ago when it flowed 5,000 feet above its present level. But the canyon's amazingly perpendicular walls are mainly the result of springs and seeps undermining the strata, and of rain and snow falling directly on the rocks.

Mysticism, reverence, and a sense of man's humility before the works of nature went into the naming of Zion's great formations. Opposite the Great White Throne (illustration, page 2) stands Angels Landing, a smaller but still massive rock. Nearer the south park entrance rise the Watchman, East Temple, and West Temple, the last-named the highest point in the park (7,795 feet).

Also there are the Sentinel, Mountain of the Sun, Three Patriarchs, Mountain of Mystery, and others, many of them unscalable and some of them reaching over 3,000 feet above the canyon floor.

Narrows Canyon Is 2,000 Feet Deep, 50 Feet Wide

At the end of the valley road lies the Temple of Sinawava, for the Indians a sacred place of fearful nature worship which communicates its message of human insignificance to white man as well as red. It is a natural amphitheater, almost completely ringed by sky-piercing, toothlike rocks that seem to close in on one after entering. The temple has its altar and pulpit—a large rock and a smaller one in the center of the circle. The Guardian of the Temple, a profile face on the south side of the altar, changes expression as one passes it.

The Narrows trail begins at the Temple of Sinawava. It leads, in one mile of easy walking, up the constricting valley to the Narrows, where the Virgin River emerges from its confining perpendicular walls. Beyond the end of the trail the river bed covers the entire canyon floor. The abyss here measures 2,000 feet deep and 50 feet wide.

Another trail climbs to the rim for a view of the valley from the top

UMI

ports were abolished by the United States-British-Chinese treaty of January 11, 1943.

The city's population, recorded at 131,659 in 1931, is reported to have shot upward past 300,000 in recent years of Japan's puppet regime. Chinese communists occupied the city on August 23, 1945, after a week's fighting with its Jap-puppet garrison. In recent fighting the nationalist aim has been to dislodge the communists from the important port.

NOTE: Chefoo may be located on the Society's Map of China.

EASTERN PRODUCTS COMPANY

HAIR STYLES MAY COME AND GO, BUT HAIR NETS GO ON FOREVER

In the Chefoo warehouse of a hair-net exporting company these women inspect every one of the thousands of nets gathered from workers in the Shantung countryside. These homemade nets sometimes have flaws which must be repaired before they are shipped out. The hair may originate in a Chinese queue. Many are still worn, largely for the purpose of turning an honest penny by their sale. It may keep its original raven hue, or be bleached and dyed to match the auburn tresses or the golden locks of some American woman.

"ROBINSON CRUSOE'S ISLAND" MAKES MODERN NEWS

"Robinson Crusoe's Island" is catching up with the times. The Chilean government plans to build an air base there.

The island's correct name is Mas a Tierra, one of the Juan Fernandez group. It is often called Juan Fernandez Island. Its craggy volcanic mass rises out of the Pacific to a peak 3,000 feet high.

It became known as Robinson Crusoe's Island because it was there, 415 miles west of South America's coast, that Alexander Selkirk, a Scot seaman, spent the four years and four months that inspired Daniel Defoe's popular classic—a tale translated into almost every written language.

Bulgaria's New Assembly Rules Land of Farms

BULGARIA'S recent elections place that eastern Balkan land on the list of European countries now in the throes of reorganizing their forms of government. The elections resulted in a communist majority in the new national assembly which will frame a constitution.

The problems to be dealt with by this legislative body are those of a largely agricultural nation about the size of Virginia. More than four-fifths of Bulgaria's six and a half million people make their living by farming and livestock raising.

Farms and Fields Are Country's Characteristic Landscape

Individual farms are usually small. Often they are fields of from one to six acres bordering villages. Long ago the farmers adopted this form of settlement for reasons of mutual protection.

Bulgaria has few big cities. Sofia (Sofiya), the capital, had an estimated population of little more than 400,000 in 1942. Plovdiv had about 100,000. Only five other cities had more than 30,000 inhabitants—Varna and Burgas, Black Sea ports; inland Pleven and Sliven; and Ruse, on the Danube.

The nation's growing industry was slowed down by the war and German demands on food and other raw material resources. Bulgaria has rich coal deposits and there are mining developments at Pernik, Bobovdol, and Maritsa. Some aluminum and salt are mined.

Still typical of Bulgaria is the landscape dotted with orchards, and checkered with tobacco (illustration, page 10) and grain fields and vineyards that stretch away to the horizon. Before the war the country's six and a half million acres of grain were more than half in wheat. Rye, barley, oats, and corn were raised in quantity in the order listed. Cattle, sheep, and poultry were counted in millions. Goats and pigs numbered nearly a million. Perfume manufacturers look forward to the blossoming of the famous valley of roses, from which came the attar of roses used in perfume making around the world.

Town Services Come to the Farms

All members of the Bulgarian peasant family except the very young and the very old labor in the fields. Farm implements are often as primitive as are methods of cultivation. In recent years, however, farm machinery, irrigation, and more varied crops have been introduced. Co-operative societies have been organized according to modern methods.

An innovation in Bulgaria is the volunteer labor brigade. This organization is made up of trained townspeople, including doctors, dentists, shoemakers, and mechanics. They visit the rural areas so that the farmers need not leave their work to make trips to town at inconvenient times.

Yet along with new ways, traditional village life goes on. Marriages are gala celebrations. At spinning parties women still prepare wool from their own flocks to make into clothing for their families.

Styles in embroidered festival costumes, rawhide boots, and sheepskin

UMI

(illustration, below). Zion Lodge closes in winter, but housekeeping cabins, campgrounds, and other facilities at the south entrance remain open all year. Winter snows, piling up on ledges and lower slopes, contrast with the red rocks. In spring, melting snows cascade over the walls.

Man made one of the most breath-taking features of Zion—the Mt. Carmel-Zion Highway. This is the east entrance road. At times it clings to the edge of the Pine Creek cliffs, but for more than a mile there is not even room for that and the road goes underground—or under-rock. Six windows, cut from the side of the tunnel, frame views of splendor that never would be seen were it not for the highway.

Zion has been described in architectural language as classical, and near-by Bryce (next week's national park article) as Gothic. The first white man saw Zion only 88 years ago. In 1861 Mormon farmers and stockmen settled in the lush valley, calling it Little Zion. Brigham Young, Mormon leader, told them it was not Zion; then they called it Not Zion.

Zion National Park was established in 1929. It is entered only by highway. Nearest railroad station with bus connections is Cedar City, Utah, about 75 miles by road northwest.

NOTE: Zion National Park may be located on the Society's Map of Southwestern United States.

See also, "Western National Parks Invite America Out of Doors," in the *National Geographic Magazine* for July, 1934; "Nature's Scenic Marvels of the West," July, 1933*; and "Glimpses East and West in America," May, 1924.

NATIONAL PARK SERVICE

VISITORS WHO CLIMB ZION CANYON'S RIM SAY THE VIEW SURPASSES THAT FROM THE FLOOR

South-West Africa Wants to Join Union

ACCORDING to a recent poll of the natives, a sheep-and-cattle-raising territory, one-fifth larger than Texas and complete with a 300-mile panhandle, wants to join the U.S.A.

The U.S.A. in this case is the British Commonwealth's Union of South Africa. The territory that wants to join up is the former German colony of South-West Africa, next door to the union. Alternative to incorporation with the dominion is to become a trust territory of the United Nations.

Ocean Current Makes Tropical Land Cool and Arid

German-held from 1884 to 1915, South-West Africa has been administered since 1920 from its capital at Windhoek by appointees of the Union of South Africa government under League of Nations mandate. If joined to the union it would be a fifth province, largest in area and smallest in population. It would add about 318,000 square miles in which there are just about 318,000 people. The union would then approach the area of the United States east of the Mississippi River.

Like most of Africa south of the Equator, South-West Africa is plateau land, averaging 3,600 feet above the sea (illustration, page 12). Its thousand miles of Atlantic coast are half in the tropics and half in the South Temperate Zone. Thus its cooler half is in a latitude corresponding to Florida's warmer half, but the Southern Connecting Current from the South Atlantic keeps the seaboard cool and arid. The almost rainless Namib Desert ranges over the full length of the coast from the shore line to 60 to 100 miles inland.

On the east, Bechuanaland's Kalahari Desert reaches into the territory. In the north, adjoining Portuguese West Africa, is the region of the pans. These are counterparts of North Africa's chotts, with shallow salt water part of the year, then dry for the remainder. The Orange River with its high and beautiful Aughrabies Falls flows along the southern border. The inland rivers of South-West Africa are dry beds most of the year, but water is obtained from shallow wells sunk in the beds.

Mines Contribute Most to the Country's Export Trade

Although too dry for large grain crops, South-West Africa is suited to livestock. The best cattle region is in the Caprivi Strip, the panhandle reaching northeast to Rhodesia. Four million sheep contribute to an export trade of a million and a half karakul pelts. Ranch "population" includes 1,480,000 goats, 140,000 donkeys and horses.

Although stock raising occupies most of the natives, diamonds, vanadium, tin, and other minerals make up three-fourths the money value of South-West Africa's export trade. Diamonds are taken from ancient alluvial deposits in the arid south coastal region.

Inland Windhoek, the capital, is a modern city of 6,000 Europeans and 14,000 natives. It has good schools, hospitals, hotels, parks, and a large reservoir. Keetmanshoop, the second-largest city, also inland, is important as a center of the territory's 1,500 miles of railroad.

Swakopmund and Lüderitz are the principal coast settlements. Both

UMI

jackets and caps have come down through a dozen centuries, since Bulgar hordes first descended from the northern steppe country to mix their blood and fortunes with those of the Slavs of this region.

Bulgaria's geographic position on the great natural route between Asia Minor and central Europe has given it an important role in the explosive events of Balkan history.

In both world wars Bulgaria fought on the German side, in spite of ancient ties with its fellow Slav nation, Russia. The late King Boris III came to the throne at the abdication of his father, King Ferdinand, near the end of World War I. After his death under mysterious circumstances in 1943, Boris was succeeded by his six-year-old son, Simeon II. When this rule was terminated in favor of a republic, the boy king joined his grandfather, the ex-king of Italy, in exile in Egypt. The council of regents which governed in the interim will be replaced by the new government.

NOTE: Bulgaria is shown on the Society's Map of Europe and the Near East.

For additional information, see "Bulgaria, Farm Land without a Farmhouse," in the *National Geographic Magazine* for August, 1932; and, in the GEOGRAPHIC SCHOOL BULLETINS, November 20, 1944, "Bulgaria Cuts Axis Supply Lines."

GEORG GR. PASKOFF

TRAFFIC IS SLIGHT UNDER PERUSHTISA'S TOBACCO-CANOPIED STREET

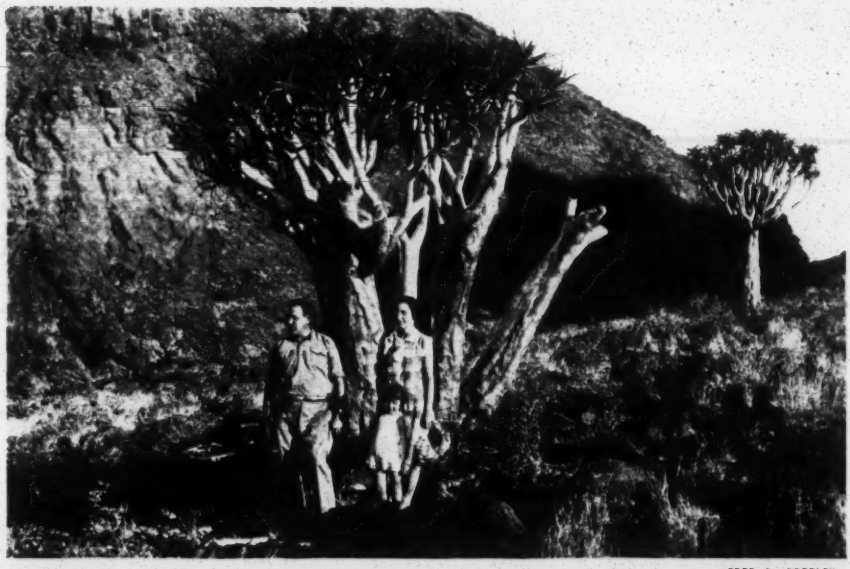
During the tobacco harvest in Bulgaria's Maritsa Valley, parallel lines of tobacco leaves, drying in the sun, make an arcade of this narrow street in Perushtisa. For high quality tobacco, the leaves are picked separately and carefully strung on cord. Sunlight filters down on primitive transportation of man and donkey power. The town, however, is new as Bulgarian towns go. It was rebuilt after its destruction in 1876 when the Bulgars unsuccessfully revolted against Turkish rule. Sun, rain, and soil of the lowlands between the Balkan and Rhodope mountains produce a tobacco crop which in prewar days equalled half the value of the nation's exports.

are vacation and health resorts, and both have railroad connections with the inland north-south line that leads eventually to Johannesburg and Capetown.

Within limits allowed by the mandate, the Union of South Africa extended a degree of self-government to South-West Africa in 1925. Districts were established and an executive committee, an advisory council, and a legislative assembly organized. Under this arrangement large land reserves have been set aside for old tribal groups—Hottentots, Hereros, Damaras, and others. From the legislative assembly comes the action advocating postwar merger with the union.

NOTE: South-West Africa is shown on the Society's Map of Africa.

For additional information, see "Keeping House for the 'Shepherds of the Sun'," in the *National Geographic Magazine*, April, 1930*.



FRED A. GREELEY

A FEW NON-BEARING ALOES GROW IN ARID SOUTH-WEST AFRICA

Springing from the crater floor of extinct Mt. Brukkaros, where the National Geographic Society once conducted solar-radiation observations, these stunted plants bloom profusely in the rainy season.

POPULAR BOOK DEPICTING GREEK LIFE NOW HAS ROMAN COMPANION

"A complete pictorial course in Greek history and culture." "A wonderful classroom aid in bringing Hellenic civilization to life." With such comments teachers greeted the series of H. M. Herget paintings in the National Geographic Society's book, *Classic Greece and the Aegean*, reprinted two years ago from the *National Geographic Magazines* of March and May, 1944.

Now this popular educational help has a companion—*The Grandeur That Was Rome*. The books, respectively, each present 32 Herget paintings depicting in full color and with minute detail all phases of Greek and Roman life. Full-page text accompanies each painting. In addition, the books include informative articles by Edith Hamilton, Richard Stillwell, and Rhys Carpenter. The Rome book is a reprint from the *National Geographic Magazine* of November, 1946.

The regular price of each book is 75¢. However, for teachers or schools ordering 50 or more copies of either volume, a special price of 60¢ has been set.